Indian Health Service:

Leader in Pharmaceutical Care

The Indian Health Service (IHS) is one of eight operating divisions under the U.S. Public Health Service. The mission of the IHS since its 1955 mandate has been to ensure equity, availability and accessibility of comprehensive, high-quality healthcare to American Indians and Alaskan Natives (AVAN). The IHS provides healthcare to approximately 1.4 million AI/AN who are members of roughly 550 tribes throughout the 50 states.[1] The IHS employs about 650 pharmacists, whose role has evolved from supply and logistics of medical goods to providing primary patient care, while continuing accurate dispensing and assuring appropriateness of drug therapy.[2]

Pharmacist-operated disease state management clinics are meeting with wide success in IHS facilities.

Today, the IHS has developed and institutionalized its six standards of care (**TABLE 1**), utilizing the patient's medical record. In the 1960s, due to remote locations or underserved settings, IHS pharmacists began providing primary care to patients with minor illnesses.[1] Now pharmacists can be privileged by the medical staff at their facilities and operate under protocol to refill prescriptions, manage chronic disease states, and even diagnose and treat some acute illnesses.

Disease State Management

Currently, disease state management is practiced in a wide v2triety of settings, from hospital outpatient clinics to chain retail stores; IHS pharmacists have been in these roles since the

LCDR Scott Giberson, *B.S. Pharm., PH-C, CPS II*
Tamara Cox, *Pharm.D. (cand.)*

Table 1

Indian Health Service Standards of Practice

- Assure appropriateness of drug therapy
- Verify that patients understand their medications and appropriate outcomes of their drug therapy
- Assure availability, preparation and control of medications
- Provide drug information, drug therapy consultation, and staff education relating to drug therapy
- Provide health promotion and disease prevention activities relating to drug use and preventative drug therapy
- Manage therapy for selected patients in whom drugs are the principal method of treatment

Source: reference 2

Table 2

Selected Disease State Management Clinics in Operation Within the IHS

Diabetes mellitus	Asthma
Anticoagulation	Smoking cessation
Hypertension	Seizure management
Cardiovascular risk reduction	Hyperlipidemia

1960s. Today, in response to the needs of its patient population, pharmacists at individual IHS facilities develop and implement many types of chronic disease management clinics (**TABLE 2**). Organized at the local level, these clinics usually involve little cost to initiate, which helps to promote pharmacy initiatives as cost-conscious programs.

One example of a pharmacist-initiated and -operated disease state management clinic is the Seizure Clinic at the Northern Navajo Medical Center in Shiprock, New Mexico. Established in 1998, this clinic currently manages 150 patients and has documented reduced numbers of adverse events with these patients (see **FIGURE 1**).

The primary goal of the Seizure Clinic is to provide an interdisciplinary team approach (consisting of a neurologist and pharmacist), thereby promoting therapeutic medical compliance, optimizing therapy, and improving patient quality of life. The Seizure Clinic provides a way for patients to receive consistent medical follow-up by providers who understand the patient's disease and the most current means of treatment. Patients experience individualized education, support, healthcare, and resources provided by the Seizure Clinic staff. Roles of the pharmacist include assessing medication compliance and side effects, evaluating patients for signs of drug toxicity, ordering laboratory testing, and providing education and support for the patient.[3]

The Claremore Indian Hospital Pharmacy in Claremore, Oklahoma, has developed one of the leading anticoagulation programs in the country. Since its inception in 1997, this clinic has managed anticoagulation for 138 patients ranging in age from 13-94 years old. Prior to clinic referral, only 40% of these patients were within their target prothrombin ranges. After management from the pharmacist-run anticoagulation clinic, 70%-80% of these patients were within target INR/PT.[3]

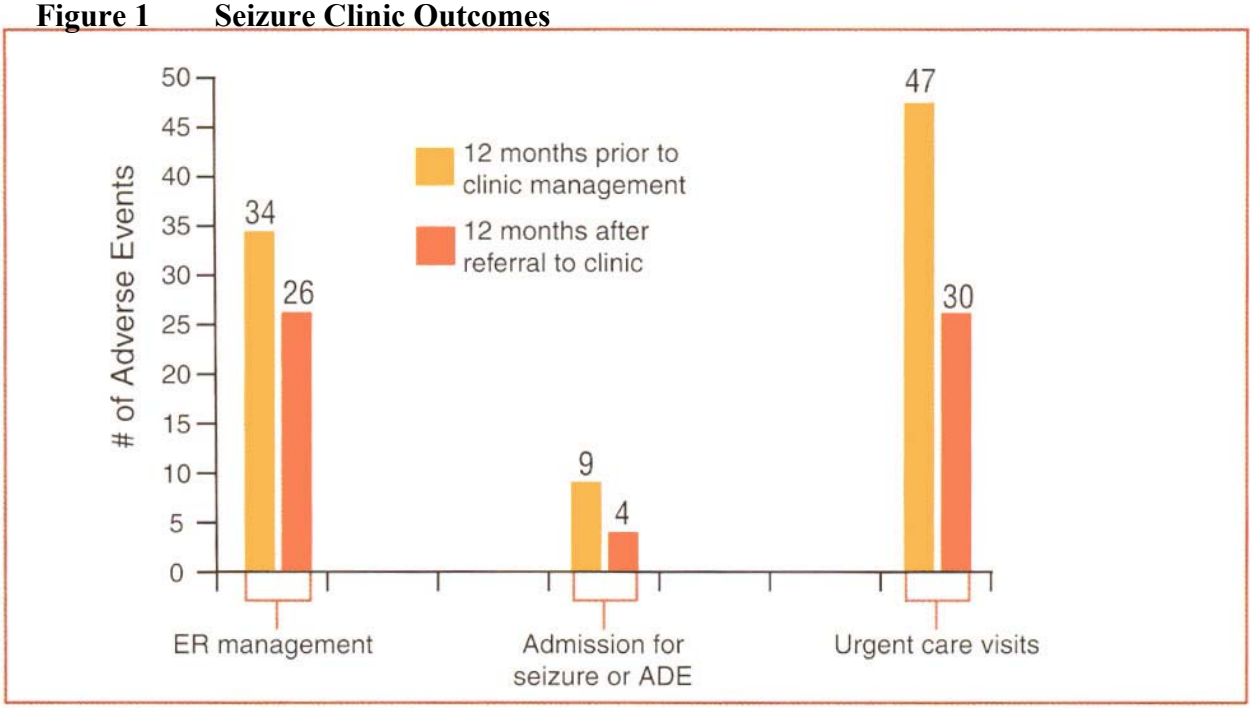
Another role that Claremore Pharmacy has assumed is that of education. Lieutenant Commander Travis Watts, Director of the Anticoagulation Program, has developed a national training program for HIS pharmacists developing anticoagulation programs at other IHS facilities. The training program is also recognized as an official training program for the IHS National Clinical Pharmacy Specialist (NCPS) Level I applicants in anticoagulation. One reason this program has been so successful is the focus on competency. This is an intense, week-long course that requires reading and preparation prior to attending sessions. Another element that separates this program from many others in the country is that it provides practical experience in "hands-on" training sessions in their clinic. The pharmacists train in a didactic setting and work with their instructors in the Anticoagulation Clinic managing patients and improving outcomes.

Likewise, the pharmacy-based Tohatchi Health Center Hypertension Management Clinic (HMC), serving the Navajo community north of Gallup, New Mexico, has been able to control blood pressure at twice the national average. Approximately 50 patients per year are actively followed in the HMC after being diagnosed by a staff physician. The goals of the clinic are outlined in **TABLE 3**.

LCDR Scott Giberson, B.S. Pharm., PH-C, CPS II
Pharmacist Clinician, Clinical Pharmacy Specialist II,
Tohatchi Health Center,
Tohatchi, NM

Tamara Cox, Pharm.D. (cand.)
University of Texas, Austin, TX

Figure 1 Seizure Clinic Outcomes



A retrospective chart review of the HMC was performed for three months in 1998. Thirty-seven charts were randomly selected showing an average age of 53 years old; 19 were female and 18 were male. The following findings were reported at the Tohatchi HMC:

- The show rate of patients with appointments was 71%;
- 61% of patients attained a controlled blood pressure, defined as BP <140/90 mmHg;
- 19% of patients who were not controlled had improved BP readings;
- 100% of the charts reviewed showed patients had received extensive hypertension education.

Table 3

Hypertension Management Clinic Objectives

- Set personalized goals of lifestyle modifications stressing weight loss, diet and increased activity
- Increase patient awareness and improve or maintain control of hypertension
- Adjust drug therapy to optimize effectiveness and minimize adverse events
- Assess patient compliance
- Monitor quality of life and therapeutic outcomes between primary provider appointments
- Provide appropriate education to the patient about hypertension and related disease states

The Tohatchi HMC numbers for attaining control of high blood pressure compare favorably with the national average.[5] The percentage of Americans in the general population with hypertension who attain control to <140/90 mmHg is 29%; the HMC clinic had 61% of its patients controlled (**FIGURE 2**).[5]

Pharmacist-operated disease state management clinics are meeting with wide success in IHS facilities. However, expanding the role of the pharmacist in a variety of IHS practice settings, from small health clinics to major medical centers, can also pose several challenges to the pharmacy staff. Balancing distributive and clinical workloads is an initial challenge once a clinic has been implemented. There may also be some resistance from the physicians and medical staff if pharmacists attempt to practice in a primary care setting. The physicians and medical staff may perceive the pharmacy staff as caring for patients in their service, and they may feel a loss of control over patient outcomes.

Gallup Indian Medical Center (GIMC), for instance, is one of the largest medical centers in the Indian Health Service. Captain Robert Parrish, R.Ph., director of several disease state management clinics, has successfully developed and implemented many disease state management clinics at GIMC. His experience in dealing with some of these issues on a daily basis may help others initiate clinics in similar practice settings.

"When dealing with distributive vs. clinical issues, you must initially provide every pharmacist with the opportunity to participate and receive training to work in a clinical setting. Everyone will then feel more comfortable at times of increased distributive workload, knowing the opportunity is there to also perform clinical function," says Parrish. Commenting on physician approval, Parrish adds, "At a major medical center with many physicians, you must find each physician's level of acceptance of the pharmacist's expanded roles, then broaden the pharmacist's scope of practice together with that physician." This is an issue of commanding respect rather than demanding respect.[7]

Clinical Pharmacy Specialists

Another innovation of the Indian Health Service is the credentialing of National Clinical Pharmacy Specialists. In October 1996, the IHS Director, Rear Admiral Michael Trujillio, M.D., granted pharmacists prescriptive authority and an expanded scope of practice. In 1998 the National Pharmacy Credentialing Committee introduced the Clinical Pharmacy Specialists requirements.[8] The goal of this credentialing program is threefold:

1. Foster and promote standardized competencies among IHS pharmacists;
2. Broaden the scope of practice to include therapeutic management of the patient;
3. Improve patient outcomes through therapeutic management.

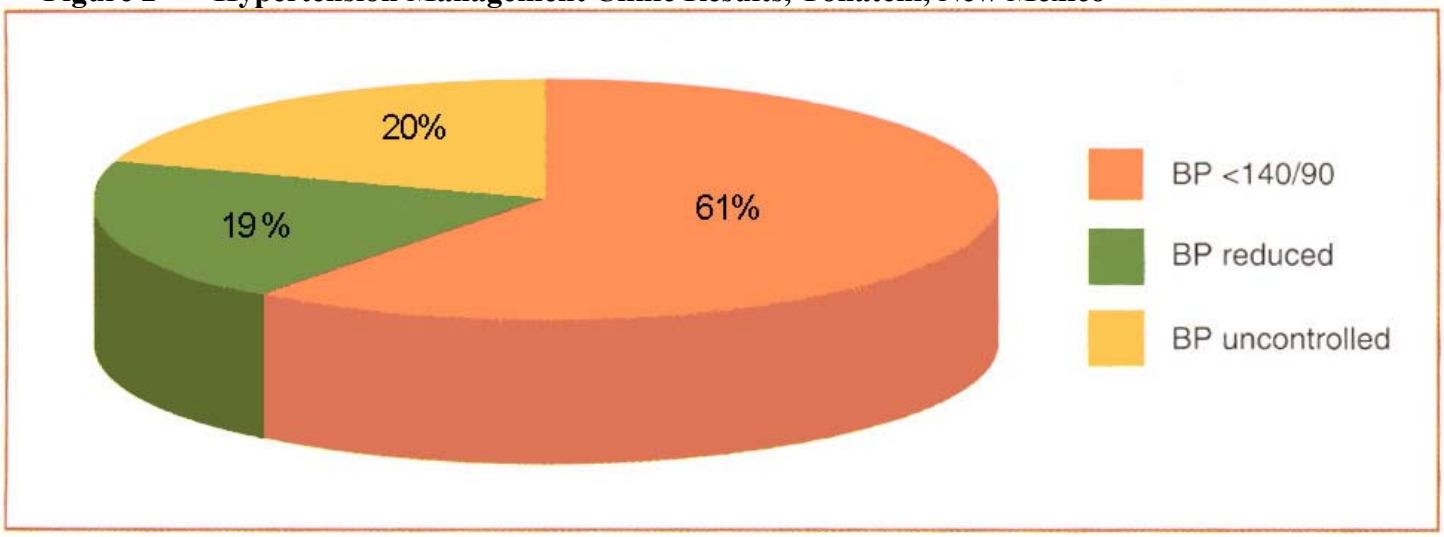
There are three levels of service recognized by the National Pharmacy Credentialing Program: Basic Level. Clinical Pharmacy Specialist Level I and Clinical Pharmacy Specialist Level II. The CPS Basic Level skills include assessing patients' over-the-counter medication needs; refilling medications for chronic conditions at the pharmacist's discretion; verifying the patient's understanding of therapy; ordering laboratory tests at the pharmacist's discretion; adjusting doses of medications in consultation with a primary care provider; providing patient education, patient follow-up, pharmaco-kinetic consultation, and total parenteral nutrition; and other consulting with primary care providers as needed.[8]

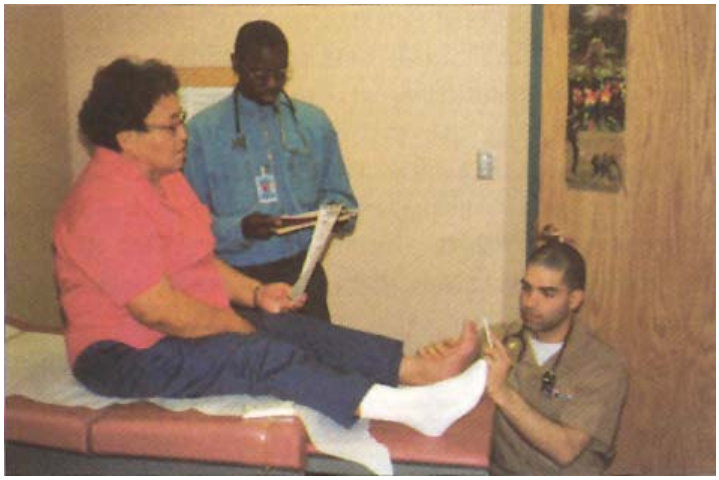
To qualify as a pharmacist at the Basic Level, a pharmacist must he with the IHS a minimum of three months and must complete the certification course at the Clinical Support Center Pharmacy Practice Training Program or its equivalent. Clinical Pharmacy Specialist Level I incorporates the basic level while expanding the focus on therapeutic management for selected patients for whom medications are the principal method of treatment.

Another innovation of the Indian Health Service is the credentialing of National Clinical Pharmacy Specialists.

Primary care providers generate the initial patient referral, while pharmacists may provide interviews, chart reviews, ordering and interpretation of laboratory tests, limited physical assessments (e.g., blood pressure, pulse, height, weight, finger stick glucose measures), prescriptive authority, patient education and patient follow-up. Treatment management is performed through primary care guidelines approved by the local medical staff.[8] Many CPS Level I providers have developed and implemented disease state management clinics for the IHS. Some

Figure 2 Hypertension Management Clinic Results, Tohatchi, New Mexico





LCDR Scott Giberson performs a diabetic foot check while Pharm.D. candidate Wayne Woodrow watches.

of the requirements to qualify for the CPS Level I include practice within the Indian Health System for a minimum of two years at the Basic Level and advanced training in the specialty areas.

CPS Level II care includes the former criteria plus diagnostic capabilities. A patient may present directly to the pharmacist on a walk-in basis or during a clinic. Level II care is intended for total therapeutic management of the patient, including diagnosis as a midlevel provider.[8] Recognition is given by the National Credentialing Committee but credentialing and privileging is granted by the medical staff at the facility of the Clinical Pharmacy Specialist.

The general qualifications for a CPS Level II include two years practicing at CPS Level 1, four years in the IHS, training in physical assessment, and an extensive internship under the supervision of a physician. These rigorous standards ensure the highest quality of patient care. As of January 2000, there were five pharmacists at the CPS Level II and 10 pharmacists at the CPS Level 1. There is an ongoing applicant pool to be credentialed by the Committee, which meets twice a year. These levels allow pharmacists to choose a scope of practice and train to achieve that clinical level.

At Tohatchi Health Clinic, the pharmacy has established a walk-in clinic staffed by a privileged CPS II pharmacist. Physicians were asked which days or times of the week the "walk-in" patient was hardest to accommodate. Consensus was that full appointment schedules on Tuesdays and made these walk-ins a challenge for staff and an opportunity for pharmacy to assist in providing direct patient care. A walk-in clinic was established during those periods of increased workload. After a six-month period, a review of the CPS Level II clinic showed the service decreased physician workload, provided pharmacists with ongoing experience as privileged providers, and gave pharmacy interns an opportunity to experience a primary care setting.

Implementing these types of clinics involves the support of the pharmacy and medical staff. At times when a practitioner is seeing patients, the remaining pharmacy team will have an increased distributive role. The physicians must also be supportive of the clinic and work with the pharmacist to consult on complicated walk-in cases.

The pharmacist-operated walk-in clinic has met with favorable patient satisfaction and documented decreased waiting time. The pharmacy walk-in clinic distributed satisfaction surveys to all patients after being seen by the CPS II provider. In 37 surveys, collected over a 4-month period, 97% of patients reported being "very happy" or "happy" with their care. Only 3% said the care was "satisfactory." None were "dissatisfied."

Conclusion

Along with a culturally enriching work environment, the innovations and pioneering of the Indian Health Service provide pharmacists with unique and expanding opportunities. The motivation and interest of individual pharmacists drives them to develop, initiate and implement disease state management clinics if they are not already available in their practice setting. Likewise, the Clinical Pharmacy Specialist Credentialing Program is now available to promote primary patient care opportunities, assuring quality and competency of pharmacy practitioners. Positive patient Outcomes are commonplace among Indian Health System pharmacy-based disease management clinics. The expanding role of the pharmacist can be beneficial to providers, pharmacists and, most importantly, the patients.

REFERENCES

1. Paavola FG, Dermanoski KR, Pittman RE; Pharmaceutical service in the United States Public Health Service, Am J Health-Syst Pharm. 1997;54:766-72.
2. Church RM, Dermanoski KR, Pukas TB: Pharmacy practice roles in the US Public Health Service: a portrait of diversity. J Pharrn Pract. 1990;3(Dec):389-97.
3. Duran T, Chief Pharmacist, USPHS Northern Navajo Medical Center, Shiprock, NM, telephone interview. 5/2/00.
4. Watts T, Director of Claremore Indian Hospital Anticoagulation Clinic, Claremore. OK. telephone interview, 5/4/00,
5. Joint National Committee; The sixth report of the joint National Committee on Prevention, Detection. Evaluation, and Treatment of High Blood Pressure; Arch intern Med/ Vol 157, Nov 24, 1997, 2413-2446.
6. Stein E, Pharm D, Director USPHS IHS Clinical Support Center, telephone interview, 4/11/00.
7. Parrish R, Director of Inpatient Pharmacy Services at Gallup Medical Center, IHS, Gallup, NM, telephone interview 5/4/00.
8. Hope M, IHS Chief Pharmacy Officer, http://home.his.gov/medical-prgms/pharmacy/news/credential/scope.asp 2/14/00.
9. Moore SR, Abramek FJ; The US Public Health Service Commissioned Corps Pharmacists: The evolution of professional practice. Pharm Hist. 1992; 34:110-5.
10. Erickson GA. Pharmacist Autonomy: A key to better care, US Dept of Health & Human Services. Jan/ Feb 87 of Tomorrow's Pharmacist.
11. Herrier RN , Boyce RW, Apgar DA: Pharmacist-managed patient-care services & prescriptive authority in the US Public Health Service. Hosp Formul. 1990: 25(jan):67-8,76-8,80.